Abstract of the Disclosure

Provided herein are novel phosphors useful in the manufacture of white light emitting diodes. The phosphors provided by the invention are described by the formula: described by the formula:

ZnS_xSe_y:Cu, A

in which x and y are each independently any value between 0 and about 1, subject to the proviso that the sum of x and y is equal to any number in the range of between about 0.75 and about 1.25; wherein A is optional and comprises at least one additional element selected from the group consisting of: Ag, Al, Ce, Tb, Cl, I, Mg, and Mn, including mixtures thereof, and wherein Cu is present in any amount between about 0.0001 % and about 5 % in mole percent based on the total molar weight of said composition.

Standard techniques used in phosphor deposition for the manufacture of light emitting diodes which comprise phosphors may be employed to produce LED's having a white light output when the phosphors of the invention are utilized.